

PATENT

Atty. Dkt. No. ATT/2002-0165

**REMARKS**

In view of the above amendment and the following discussion, the Applicant submits that none of the claims now pending in the application are made obvious under the provisions of 35 U.S.C. § 103. Thus, the Applicant believes that all of these claims are now in allowable form.

**I. CLAIM OBJECTIONS**

The Examiner objected to claim 19 for informalities. Specifically, the Examiner suggests that the term --first-- should be inserted before "queue." Responsive to the Examiner, the Applicant herein amends claim 19 accordingly. Specifically, --first-- is inserted before "queue." As such, the Applicant respectfully requests the objection be withdrawn.

**II. REJECTION OF CLAIMS 1-22 UNDER 35 U.S.C. § 103****A. Claims 1, 2, 7, 8, 13-16 and 22**

The Examiner has rejected claims 1, 2, 7, 8, 13-16 and 22 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Ando, et al. (U.S. Patent Publication No. 2004/0213242, published on October 28, 2004, hereinafter "Ando") in view of Reeves, et al. (U.S. Patent Publication No. 2002/0071390, published on June 13, 2002, hereinafter "Reeves"). Applicant respectfully traverses the rejection.

Ando teaches an ATM switch. Ando teaches using queues that can prioritize different quality of service categories within ATM and MPLS traffic. (See Ando, para. [0027]). Ando teaches that ATM traffic queues are given priority over MPLS traffic. (See Ando, para. [0055]).

Reeves teaches a system and method for establishing a communication path associated with an MPLS implementation of an ATM platform. A partial path for the communications path is established from the start node to a terminating node in the intermediate nodes and at the terminating node, if a communications link to a next-hop node does not exist in the intermediate nodes, then the terminating node is established as an interim egress node for the communications path. (See Reeves, Abstract).

PATENT

Atty. Dkt. No. ATT/2002-0165

The Examiner's attention is directed to the fact that Ando and Reeves, alone or in any permissible combination, fail to teach or suggest the novel concept of a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic, as positively recited by the Applicant's independent claims 1, 8 and 14. Specifically, Applicant's independent claims 1, 8 and 14 recite:

1. A method of configuring a packet-switched network comprising the steps of:
  - (i) receiving a request to establish a traffic engineering tunnel across the packet-switched network;
  - (ii) at a router traversed by the traffic engineering tunnel, creating a queue for packets carried inside the traffic engineering tunnel; and
  - (iii) reserving bandwidth for the queue in accordance with the request to establish the traffic engineering tunnel, wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic at the router and the reserved bandwidth for the queue can only be used by packets carried inside the traffic engineering tunnel. (Emphasis added.)
8. A method of routing packets in a packet-switched network comprising the steps of:
  - (i) receiving a packet at an incoming interface of a router;
  - (ii) determining whether the packet has a label identifying a traffic engineering tunnel, thereby identifying that the packet is being carried inside the traffic engineering tunnel;
  - (iii) where the packet is being carried inside the traffic engineering tunnel, sending the packet to a queue associated with the label so that the packet in the queue receives higher priority over other traffic at the router and receives a bandwidth reserved for the queue associated with the label identifying the traffic engineering tunnel. (Emphasis added.)
14. A router comprising:
  - (i) a plurality of interfaces;
  - (ii) a first processing module that sorts packets received at an interface into those packets that are carried inside a traffic engineering tunnel and those packets that are not carried inside a traffic engineering tunnel;
  - (iii) a first queue which receives from the first processing module only packets carried inside a traffic engineering tunnel;
  - (iv) a second queue which receives from the first processing module packets that are not carried inside a traffic engineering tunnel; and

PATENT

Atty. Dkt. No. ATT/2002-0165

(v) a second processing module that receives packets from the first and second queues and gives higher priority to packets received from the first queue. (Emphasis added.)

In one embodiment, the Applicant's invention teaches a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic at the router. Advantageously, the Applicant's invention allows the packet-switched network to prioritize tunnel traffic versus non-tunnel traffic.

In contrast, the combination of Ando and Reeves, alone or in any permissible combination, fails to teach or suggest the Applicant's invention because Ando and Reeves fails to teach or to suggest a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic, as positively claimed by Applicant's independent claims. First, the alleged combination (as taught by Ando) fails to teach or suggest the use of any traffic engineering tunnels. The Applicant respectfully submits that simply teaching the use of MPLS (IP) traffic does not teach or suggest that the MPLS (IP) traffic is transmitted via a traffic engineering tunnel. Nowhere in Ando, does Ando teach or suggest using traffic engineering tunnels to transmit data.

Moreover, even if Ando can be broadly interpreted that simply teaching MPLS (IP) traffic teaches a traffic engineering tunnel as alleged by the Examiner, the Applicant respectfully submits that Ando actually teaches away from the Applicant's invention. Ando teaches using service queues  $Q_0 - Q_{N+6}$  for ATM traffic and queues  $Q_6 - Q_{N+6}$  for non-ATM traffic. (See Ando, para. [0053] – [0054]). Then Ando explicitly states “priorities are set higher as the upper part of the figure is approached as shown in FIG. 2.” (See *Id.* at para. [0055]). FIG. 2 of Ando shows that the non-ATM queues having MPLS traffic have lower priority. In stark contrast, the Applicant's invention teaches that the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic. Therefore, Ando teaches away from the Applicant's invention and cannot be permissibly combined with Reeves.

PATENT

Atty. Dkt. No. ATT/2002-0165

Moreover, Reeves fails to bridge the substantial gap left by Ando because Reeves also fails to teach or suggest a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic. Reeves fails to teach or suggest the use of any queues. In addition, Reeves only teaches giving priority to establish MPLS-enabled egress interface indexes over non-MPLS egress interfaces. (See Reeves, para. [0101]). This is not the same as a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic. Therefore, Ando and Reeves fail to render obvious the Applicant's independent claims 1, 8 and 14.

Moreover, dependent claims 2, 7, 13, 15-16 and 22 depend, either directly or indirectly, from independent claims 1, 8 and 14, respectively, and recite additional limitations. As such, and for the exact same reason set forth above, the Applicant submits that claims 2, 7, 13, 15-16 and 22 are also patentable over Ando and Reeves. As such, the Applicant respectfully requests the rejection be withdrawn.

**B. Claims 3-6, 9-12 and 17-21**

The Examiner has rejected claims 3-6, 9-12 and 17-21 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Ando and Reeves in view of Nomura (U.S. Patent Application No. 6,973,504, issued on December 6, 2005, hereinafter referred to as "Nomura"). Applicant respectfully traverses the rejection.

The teachings of Ando and Reeves are discussed above. Nomura teaches a method for allocating network aggregation bandwidth and a network system using the same. The method enables the decrease of required resources for the bandwidth reservation in an inter-site connection network used for communication between communication sites. (See Nomura, Abstract.)

The Examiner's attention is directed to the fact that Ando, Reeves and Nomura (either singly or in any permissible combination) fail to teach or suggest a method of configuring a packet-switched network comprising creating a queue for packets carried

PATENT

Atty. Dkt. No. ATT/2002-0165

inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic, as positively claimed by the Applicant's independent claims 1, 8 and 14. (See *supra*.)

As discussed above, Ando and Reeves are devoid of any teaching or suggestion of a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic. This significant gap is not bridged by the teaching of Nomura. As such, the combination of Ando, Reeves and Nomura fails to make obvious Applicant's independent claims 1, 8 and 14.

In addition, dependent claims 3-6, 9-12 and 17-21 depend from independent claims 1, 8 and 14, respectively, and recite additional limitations. As such, and for the exact same reason set forth above, the Applicant submits that claims 3-6, 9-12 and 17-21 are also patentable over Ando, Reeves and Nomura and respectfully requests the rejection be withdrawn.

### Conclusion


Thus, the Applicant submits that all of these claims now fully satisfy the requirements of 35 U.S.C. § 103. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

August 14, 2007

Patterson & Sheridan, LLP  
595 Shrewsbury Avenue  
Shrewsbury, New Jersey 07702

  
Kin-Wah Tong, Attorney  
Reg. No. 39,400  
(732) 530-9404